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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,268	02/29/2000	Robert George Ahrens	6-89-5-2	1790

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FAIRFIELD, CT 06430

EXAMINER

VALENCIA, DANIEL E

ART UNIT PAPER NUMBER

2874

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,268

Applicant(s)

AHRENS ET AL.

Examiner

Daniel E Valencia *DU*

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 5-8, 13-16, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 5, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's communication filed on May 5, 2003 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Many of applicant's claims are now allowable. In view of further consideration, however, and the consequent discovery of previously uncited prior art documents, a new rejection is applied to certain of the pending claims. This action is **not** made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9-12, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laor U.S. Patent No. 6,031,947 (previously cited). Laor discloses a switch that teaches essentially all the elements of the abovementioned claims. Regarding claims 1, 9, and 17, Laor discloses a method of aligning fiber ends including using a bundle with a receiving fiber that analyzes the signal strengths of the surrounding fibers relative to the receiving fiber in order to detect the location and provide a feedback for precise alignment (col. 3, lines 14-24 and col. 5, lines 53-64). As

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to claims 2, 3, 10, and 11, one of ordinary skill in the art would recognize that selecting N to facilitate fabrication and having a core diameter that captures as much light as possible are desirable features. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to select an appropriate N and use a core diameter to capture as much light as possible.

Although Laor does not explicitly state that the receiving fiber is recessed as in claims 4, 12, and 18, this is a non-critical limitation and does not further limit the scope of the invention. On page 3, lines 21-25 the specification states that the invention could be employed using fibers that terminate in the same plane, or where the receiving fiber is recessed. Additionally, one of ordinary skill in the art would recognize that there are various reasons one might recess a central fiber. For example, one may want to recess the central fiber in order to insert a lens therein. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to recess the receiving fiber in the device disclosed by Laor.

Allowable Subject Matter

Claims 5-8, 13-16, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For reasons for indicating allowable subject matter regarding claims 5, 13, and 19, see the previous Office Action (Paper No. 5, page 4, paragraph 3).

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For reasons for indicating allowable subject matter regarding claims 7, 15, and 20, see the previous Office Action (Paper No. 5, page 4, paragraph 4).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee U.S. Patent No. 6,556,751 discloses an apparatus and method of measuring optical adjustment and alignment of fiber block that uses a fiber array.

Deveau U.S. Patent No. 5,559,915 discloses an apparatus and method for aligning an optical fiber array with an optical integrated circuit assembly with a desired receiving fiber.

Craig U.S. Patent No. 4,678,328 discloses a non-optimum waveguide optical sensor that uses relative signal strengths of a bundle to position the light sources.

Sontag U.S. Patent No. 5,005,979 discloses an optical position detection for aligning and optical source with a point of interest on an optical fiber bundle.

Roulund U.S. Patent No. 4,071,754 discloses a beam alignment detector that aligns a fiber bundle with an optically integrated chip.

Ota U.S. Patent No. 5,946,099 discloses a method of measuring positions of optical transmission members.

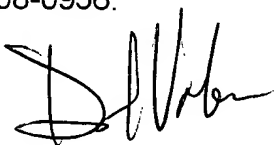
Applicant's arguments with respect to claims 1, 9, and 17 have been considered but are moot in view of the new ground(s) of rejection.

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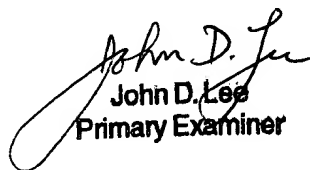
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E Valencia whose telephone number is (703)-305-4399. The examiner can normally be reached on Monday-Friday 9:30-6:00.

The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-7724 for regular communications and (703)-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



DEV
June 12, 2003



John D. Lee
Primary Examiner